

Re: JEM based on Arithmetic Mean [response]

Thomas Bateson to: Bob Benson

10/05/2012 03:00 PM

From: Thomas Bateson/DC/USEPA/US

To:

Cc: Krista Christensen/DC/USEPA/US@EPA, Leonid Kopylev/DC/USEPA/US@EPA, Danielle DeVoney/DC/USEPA/US@EPA, David Berry/R8/USEPA/US@EPA, brattin@srcinc.com, HILBERTJ@UCMAIL.UC.EDU

Bob,

Thanks for sharing the proposal. You asked for a reply by today.

This write-up is a good start but we are not yet ready to concur. Krista provided some specific comments. Our general comments follow.

NCEA thinks the methods proposed here (as we think we understand them) are generally appropriate and potentially scientifically defensible but, as written, would not stand up to peer-review without greater detail in the text to explain the proposed method, justify it and defend the decisions that are made. Further, it won't stand up without statistics to more formally compare the different strategies. The proposal needs to be made more defensible. A non-exhaustive list includes: explanation of validity of averaging of samples of different duration, link of clear IH considerations to choices made in modeling, and detailed reasoning for exclusion of outlier for modeling background data).

While several pieces alleviate influence of post-1980 indoor estimates on the prior exponential fit, fits to show lack of sensitivity to this assumption are needed. We had made a previous comment that it should be shown that the inclusion of the post-1980 data was not influencing the early 1970 fit but then we moved on to two- and three-piece models. This may not be an issue but it should be shown.

NCEA is requesting a revised proposal with the relevant statistics for assessing goodness of fit (Leonid has asked for Chi squares statistics rather than MSE [not sure how to compare MSEs from models with different numbers of parameters]). The large difference in the number of parameters used for the different models may impact our interpretation of the results. Nonetheless, as Bob stated in the proposal email, the plots appear to show fits that are generally reasonable.

NCEA also notes that none of the presented materials are based on the variance-weighted analyses and until that can be shared, we should not collectively proceed. NCEA can assist with this if there is a need.

NCEA would also like to clarify that the first point in Bob's email of 10/1 @12:58 PM which states that this proposed approach is "qualitatively similar to the approach used by UC in deriving the GM-based JEM." Does this mean that the GM-based JEM will be re-done based on the same approach of allowing for a three-piece function with cut-point demarking the period of different IH practices? The methods for the two JEM should follow the same general outline – just in regular vs. in log space.

Enjoy Paris next week. Hopefully, Bill, David, Tim and Linda will be available to consider our points and we can reconvene upon your return.

Tom

Thomas F. Bateson, ScD MPH
Epidemiologist
Effects Identification & Characterization Group
EPA/ORD/NCEA
1200 Pennsylvania Ave. NW (Mail Code 8623P)
Washington, DC 20460

Phone: 703-347-8570

Bob Benson---09/21/2012 11:05:11 AM---Attached is the Region and UC recommended procedure for developing the Marysville Job Exposure Matix

From: Bob Benson/R8/USEPA/US
To: Thomas Bateson/DC/USEPA/US@EPA, Krista Christensen/DC/USEPA/US@EPA, Leonid Kopylev/DC/USEPA/US@EPA, Danielle DeVoney/DC/USEPA/US@EPA, David Berry/R8/USEPA/US@EPA, brattin@srcinc.com, HILBERTJ@UCMAIL.UC.EDU
Date: 09/21/2012 11:05 AM
Subject: JEM based on Arithmetic Mean

Attached is the Region and UC recommended procedure for developing the Marysville Job Exposure Matix based on the arithmetic mean of the IH data. Please review.

A conference call to discuss is Sept 27, 1:00 PM (EDT) [11:00 am, MDT]. At the call I will ask for concurrence or presentation of a workable alternative.

Call in number: 1-866-299-3188
Access code: 303-312-6712#
I will open the line from Region 8.

[attachment "Section F4 revision 3.docx" deleted by Thomas Bateson/DC/USEPA/US] [attachment "Figure F4.1 (LOESS).pdf" deleted by Thomas Bateson/DC/USEPA/US] [attachment "Figure F4.2 (trionize independent b).pdf" deleted by Thomas Bateson/DC/USEPA/US] [attachment "Figure F4.3 (trionize common b).pdf" deleted by Thomas Bateson/DC/USEPA/US] [attachment "Figure F4.4 (bkg fit).pdf" deleted by Thomas Bateson/DC/USEPA/US]